



## MATERIAL SAFETY DATA SHEET

### Company Detail :

MANUFACTURES NAME AND  
ADDRESS :  
PT.CIMANGGIS SAKTI  
Jl. Kapten Tole Iskandar Km.2  
Sukmajaya (Depok)  
Cimanggis - Bogor  
West Java - Indonesia

EMERGENCY TELEPHONE NO :  
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## ZINC CHLORIDE

### 1. Product Identification

Synonyms : Zinc Chloride, Zinc Dichloride, Zinc Butter  
CAS No : 7646-85-7  
Molecular Weight : 136.29  
Chemical Formula :  $ZnCl_2$

### 2. Composition / Information on Ingredients

Ingredient : Zinc Chloride  
CAS No : 7646-85-7  
Hazardous : Yes

### 3. Hazards Identification

Emergency Overview

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**DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT.  
HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE  
CARDIOVASCULAR SYSTEM.**

Health Rating : 3 – Severe ( Life )  
Flammability Rating : 0 – None  
Reactivity Rating : 0 – None  
Contact Rating : 3 – Severe ( Corrosive )  
Lab Protective Equip : GOGGLES ; LAB COAT; VENT HOOD;  
PROPER GLOVES  
Storage Color Code : White ( Corrosive )

## Potential Health Effects

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### Inhalation:

Extremely destructive to tissues of the mucous membranes and upper respiratory tract.

Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

### Ingestion :

Toxic. May cause irritation or corrosion to the gastrointestinal tract with abdominal pain, nausea, and vomiting. May cause delayed death occurring from strictures of the esophagus and pylorus.

### Skin Contact:

May cause severe irritation, skin burns and ulcerations. Solutions are corrosive.

Symptoms include redness and pain.

### Eye Contact :

May cause redness, pain, and blurred vision. Splashes from solutions may cause eye damage.

### Chronic Exposure :

Repeated skin contact can cause varying degrees of problems ranging from dermatitis to ulcerations. Repeated inhalation can cause occupational asthma.

### Aggravation of Pre-existing Conditions :

Dermatitis, cardiac and respiratory disorders.

## 4. First Aid Measures

### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

### Ingestion :

If swallowed, DO NOT INDUCE VOMITING. Give Large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### Skin Contact :

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### Eye Contact :

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## 5. Fire Fighting Measures

Fire :

Not considered to be a fire hazard.

Explosion :

Not considered to be an explosion hazard.

Fire Extinguishing Media :

Use any means suitable for extinguishing surrounding fire.

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues ( dust, solids ); observe all warnings and precautions listed for the product.

## 8. Exposure Controls / Personal Protection

Airborne Exposure Limits:

Zinc chloride : OSHA Permissible Exposure Limit (PEL) : 1 mg/m<sup>3</sup> (TWA) 8H, as fume. ACGIH Threshold limit Value (TLV) : 1 mg/m<sup>3</sup> (TWA); 2 mg/m<sup>3</sup> (STEL) for fume.

Ventilation System:

A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a full facepiece respirator with dust / mist filter may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING** : Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/ or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

Appearance : Transparent Liquid

Odor : Odorless.

Solubility : 100 %

Boiling Point : 120°C approx

Melting Point : Liquid at Room Temperature

## 10. Stability and Reactivity

Stability :

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products :

When heated to decomposition it emits toxic fumes of chlorine and zinc oxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Cyanides and sulfides, powdered zinc. When mixed with potassium, a weak explosion will occur on impact.

Conditions to Avoid:

Incompatibles.

## 11. Toxicological Information

Oral rat LD 50: 350 mg/kg, Investigated as a tumorigen, mutagen, reproductive effector.

-----\ Cancer Lists \-----  
-----NTP Carcinogen-----

Ingredient	Known	Anticipated	IARC Category
Zinc Chloride ( 7646-85-7 )	No	No	None

## 12 . Ecological Information

Environmental Fate:  
No information found.

Environmental Toxicity:  
No information found.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Domestic ( Land, D.O.T )

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Proper Shipping Name : ZINC CHLORIDE, ANHYDROUS  
Hazard Class : 8  
UN / NA : UN2331  
Packing Group : III  
Information reported for product/ size : 110LB

International (Water, I.M.O.)

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Proper Shiping Name : ZINC CHLORIDE,ANHYDROUS  
Hazard Class : 8  
UN / NA : UN 2331  
Packing Group : III  
Information reported for product / size : 110LB

International ( AIR, I.C.A.O.)

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Proper Shipping Name : ZINC CHLORIDE, ANHYDROUS  
Hazard Class : 8  
UN / NA : UN 2331  
Packing Group : III  
Information reported for product / size : 110LB

## 15. Regulatory Information

-----\ Chemical Inventory Status – Part 1 \-----  
Ingredient TSCA EC Japan Australia  
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Zinc Chloride ( 7646 – 85 – 7 ) Yes Yes Yes Yes

-----\ Chemical Inventory Status – Part 2 \-----  
----- Canada -----  
Ingredient Korea DSL NDSL Phil  
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Zinc Chloride ( 7646 – 85 – 7 ) Yes Yes No Yes

-----\ Federal, State & International Regulations– Part 1 \-----  
- SARA 302 - - - - - SARA 313 - - - - -  
Ingredient RQ TPQ List Chemical Catg  
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Zinc Chloride ( 7646 – 85 – 7 ) No No No Zinc Compoun

-----\ Federal, State & International Regulations – Part 2 \-----  
- RCRA - - TSCA -  
Ingredient CERCLA 261.33 8 ( d )  
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Zinc Chloride ( 7646 – 85 – 7 ) 1000 No No

Chemical Weapons Convention : No TSCA 12 ( b ) : No CDTA : No  
SARA 311 / 312 : Acute: Yes Chronic: Yes Fire: No Pressure: No  
Reactivity : No ( Pure / Solid )

**Australian Hazchem Code : 2X**  
**Poison Schedule : S6**

WHMIS :

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations ( CPR ) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

NFPA Ratings : Health : 3, Flammability : 0, Reactivity : 0

Label Hazard Warning:

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE CARDIOVASCULAR SYSTEM

Label Precautions:

Do not get in eyes, on skin, or on clothing. Do not breathe dust. Keep container closed  
Use only with adequate ventilation. Wash thoroughly after handling.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.